

Weekly Report – week of March 8, 2011
Fabrication and Assembly of ERL hardware
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Cryogenics: The installation of the cryogenic transfer lines along with wiring of level and temperature sensors to support the ERL and VTF cryo refrigerator continues. The electrician's efforts continue, addressing power needs to the control panels. A meeting for the Intermediate Design review for the phase 2 cryogenic transfer lines to connect the plant to the ERL cryo-modules took place at the vendor's factory.

Laser: Working with C-AD controls group on pulse measurement issues. Working with Utilities group to improve environment stability. Circuit development and timing stabilization studies for SRF photocathode experiments. Controls work on mirror adjustment and translation stages continues. Preparations for installation of supplementary air conditioning capacity to address problems with environment stability.

FPC conditioning: The accelerator safety system review committee items are being addressed. Final PASS certification including the Klystron interlock is nearing completion. A sub-committee has been identified to perform a final walk-thru of the FPC test experiment prior to operations.

Photocathode: A copper substrate sample has been coated with antimony in the deposition system. Antimony was deposited on both SS and Molybdenum substrates. Antimony thickness varied significantly over the deposited area. The copper sample will be looked at with the SEM to check for thickness uniformity.

Gun Cryomodule: The gun cavity has been returned to BNL after retuning. The required beam tube for the string mock-up has been reworked and returned from the vendor.

PASS System: The modification that has been implemented to allow operations of the 1MW Klystron and the FPCs in the ERL Block enclosure is in final testing. The PASS system for the LBH is operational. A contactor will be added to interlock the RF power supply. The VTF PASS system will continue to make progress as manpower is available and schedule permits.

Mezzanine: The modifications to the mezzanine have been scheduled to be performed next week.

Large Grain Gun: Vacuum system requirements have been identified and the preliminary list of components has been specified. Requisition for a 200 W amplifier has been submitted, and a requisition for a 20 W amplifier to be used for low-power testing will be submitted shortly.

5-cell cavity/cryomodule: The paperwork continues for the G-5 test safety review.

ERL injection line: Vacuum envelope is in preparation to final review, correction magnets are under design.

ERL Extraction line: Magnets are being fabricated, beam dump pressure vessel code compliance under evaluation, vacuum/instrumentation layout needs to be reviewed and finalized.

ERL Tech Support Area: The EEBA area continues to move forward. Design drawings and cost estimates have been completed. The BID packages have gone out for the construction of the enclosure and refurbishment of this area.